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APPENDIX B

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Performance Evaluation by Performance-Based Metrics Overview

General

This Appendix sets forth the basis upon which an evaluation of the performance of the Thomas Jefferson National Accelerator Facility (otherwise known as "Jefferson Lab;" formerly CEBAF) performance will be based as required by contract Article 6 (Use of Objective Standards of Performance, Self Assessment and Performance Evaluation) and Article 7 (Performance Measure Review) of the contract. The evaluation procedure described below utilizes a set of "key indicators" which will broadly measure the laboratory's performance in seven critical areas. Associated with most "key indicators" (both peer reviews and performance metrics) is a set of "secondary indicators" which will measure the laboratory's performance in a more detailed way and extend the validity of each respective "key indicator." As it relates to Article 6 of the contract and the peer review process for the Science and Technology, Business and Administrative Practices and Responsible Institutional Management sections of the Performance Evaluation Plan, the parties agree that: (i) the panel will be selected by mutual agreement; and (ii) DOE will concur with the official charge to the panel prior to issuance by SURA.

Table B.1, Performance Objectives and Their Key Indicators, shows the seven performance objectives of this contract and their corresponding key indicators. Following this table are seven sections elaborating on each key indicator and listing the associated secondary indicators with established performance goals, where appropriate. A system for scoring performance in the seven categories and for integrating these scores into an overall evaluation rating for each performance period is provided under the subheading "Scoring Methodology." The parties agree to adhere to this system in arriving at the overall evaluation of the laboratory's performance against these measures. The schedule for performing the Laboratory evaluation is provided under the subheading "Appendix B Annual Appraisal Timeline." It is the intent of the parties to strictly adhere to this schedule although either party may request a revision to the proposed schedule.

For FY00, performance measures have been established in accordance with the annual reassessment process outlined in the paragraph entitled "Periodic Reassessment" and the FY99 results. The FY00 performance goals have been set based on: (i) the outcome of the FY99 performance measures in relation to the FY99 performance goals; and, (ii) other pertinent data.

Goal Setting

The primary considerations for selecting performance measures and setting goals at Jefferson Lab are:

- Performance measures should provide accurate, valid measures of performance in areas of importance to DOE and Laboratory management.
- The total set of measures should reflect priorities of DOE and Laboratory management and a proper balance of cost-benefit and return-on-investment.
- Setting goals that optimize the overall Laboratory mission frequently yields a more desirable result than goals which stress maximum quantitative performance in narrow areas. For instance, simply pushing for maximum accelerator availability might penalize highly specialized or difficult experiments with high scientific merit or impede accelerator development. In other areas, pushing for unreasonably high quantitative goals might divert limited resources from other more mission-oriented activities with little or no benefit.
- The broader the base of comparison of Jefferson Lab's performance with similar institutions, the greater the possibility of learning improved ways of performing activities and how important it is to perform those activities.
- Comparison with other facilities is most effective when objectives, constraints and hazards at the facilities are similar, or normalization is relatively simple.
- The performance measures, the comparison base, and the goals should be selected keeping in mind the ease of obtaining current comparison data.

Given these considerations, the DOE and SURA have agreed that the primary use of performance measures will be to compare the Laboratory's performance against the mission objectives of the Laboratory taking into account the maturity of its various programs (e.g., the criteria to achieve an "outstanding" rating for a mature program would be different from that for a young program). The allocation of points among the performance objective categories is the first indication of this value judgment. The DOE/Laboratory Performance Measurement Teams were advised to select as broad a comparison area as practical in order to maximize the opportunity to improve systems and processes, but to define the performance measures and set the goals with the intent of enhancing the mission of the Jefferson Lab. While this approach requires a considerable exercise of judgment and somewhat limits a direct comparison with other facilities based on score, it presents the best opportunity to improve the overall performance of the Laboratory. This approach results in a mixture of broad performance measures where Laboratory performance can be quantitatively compared with other DOE and/or industrial facilities (such as property loss ratios), and measures that are much more unique to the mission of this Laboratory (such as Reliable Operations, Production of Scientific and Technical Manpower and Technology Transfer). A practice used extensively at Jefferson Lab that combines broad measures with measures very closely tailored to the mission of the Laboratory is the Peer Review concept. Depending on the function or category under review, technical and/or management personnel with similar responsibilities at other facilities review the Laboratory's performance as prescribed in a carefully constructed charter and arrive at a

score or adjectival rating for that function or category. This practice makes available the experience and expertise of nationally recognized experts in various fields and provides maximum opportunity for knowledgeable feedback leading to performance improvement.

Performance Report

The Contractor will report on the results of its performance as defined by this Appendix at the end of each fiscal year. This Performance Report should include for each performance category, in addition to actual performance metric scores and/or peer review results, an overview self-assessment which includes: a brief description of major achievements; significant strengths and weaknesses; the status of responses to recommendations from the Peer Reviews, an assessment of whether the performance measures were valid indicators of performance; other lessons learned; principal areas of emphasis for improvement for the following fiscal year; and any recommended changes in performance measures or goals for the following fiscal year. A discussion of the Laboratory's overall performance and the major areas across the entire Lab that SURA perceives as the most important focus areas for the upcoming performance period will also be included.

The Department will use the Contractor's Performance Report along with other inputs to evaluate the Contractor's overall performance for each evaluation period. These other inputs include observations and results of inspections conducted by the Site Office staff, and programmatic/ functional appraisals and reviews coordinated by the Site Office. As a means of incorporating these additional considerations, the parties have agreed that the Contracting Officer will develop an overlay performance report which will supplement the product of the performance measure process. This report will capture the highlights of the DOE Site Office observations/reviews, results of DOE appraisals, as well as other important information (including mitigating factors or events that may be outside the control of the contractor) that will be used to balance the overall performance assessment for the year. This overlay report will include a discussion of performance against regulatory and contract requirements that were not defined in terms of performance measures. The parties agree that the results from these assessment inputs could change the category rating and/or overall performance rating (up or down) by as much as one performance level.

Periodic Reassessment

As described in Article 6, the parties also agree to a reassessment of these performance measures prior to the beginning of each evaluation period. In particular, the parties agree to:

1. Assess the validity of each respective indicator as an accurate and meaningful reflector of performance (using the detailed secondary indicators and other criteria) and to replace them with more appropriate indicators if necessary,
2. Consider adding to or subtracting from the complement of secondary indicators in order to more meaningfully and accurately track vital performance objectives or to correct deficiencies in the more global key indicators,

3. Consider adding or subtracting key indicators or secondary indicators as appropriate in response to the evolving requirements of DOE; in particular, both parties undertake to replace DOE Directives whenever feasible by performance metrics.

Scoring Methodology

The parties have agreed to the following scoring methodology:

A. POINT ALLOCATION: A 1000-point scale will be distributed among the seven performance objective categories as follows:

1. Outstanding Science and Technology	300 points
2. Reliable Operations	250 points
3. Production of Scientific and Technical Manpower	75 points
4. Corporate Citizenship	75 points
5. Quality Performance in EH&S	100 points
6. Business and Administrative Practices	100 points
7. Responsible Institutional Management	100 points

Within each of the seven performance objective categories, the individual points have been allocated between the key indicator and the secondary indicators.

B. POINT SCALE: A grading scale will be used for rating each category and the overall performance evaluation as follows:

Adjectival Rating	% of Points
Outstanding	90% to 100%
Excellent	80% to < 90%
Good	70% to < 80%
Marginal	60% to < 70%
Unsatisfactory (Poor)	50% to < 60%
Unsatisfactory (Failing)	<50%

After applying the appropriate percentage to the points assigned for each indicator, accuracy at the one decimal point level will be retained.

C. RATING EACH CATEGORY: The following weighted average approach will be used to rate each of the seven performance objective categories:

1. For each performance measure, multiply performance percent achieved times the assigned points to arrive at the awarded points.
2. Sum the assigned points and sum the awarded points for all performance measures to arrive at a total for each (i.e., total assigned points and total awarded points).
3. Divide the total awarded points for the category by the total assigned points for the category and convert to a percentage.
4. Arrive at an overall adjectival rating for the category by using the point scale in paragraph (B) above.

In years where a new indicator which requires baselining might be added to the set, the Laboratory evaluation score will be based on paragraph (D) below

D. OVERALL PERFORMANCE EVALUATION: The following methodology will be used to determine the overall performance rating:

1. Sum the assigned points and sum the awarded points for each performance measure being scored in the performance period. (For odd years, the same score achieved in Responsible Institutional Management from the prior year will be carried forward and included in the performance evaluation calculation).
2. Divide the awarded points by the assigned points. This percentage of 1000 is the laboratory's overall score for the evaluation period. This percentage is also used in Step #5, Section C, to provide a score for the baselined areas.
3. Arrive at the overall adjectival performance rating for the contract in accordance with Section B, above, on the point scale.
4. Incorporate the results of DOE Site Office overlay performance report as described in the paragraph entitled "Performance Report" on p.3 of this Appendix.

Contract Performance Annual Appraisal Timeline

DATE	ELEMENT
7/1/FY-1	Functional teams from DOE and SURA develop Performance Metrics.
9/1/FY-1	Performance Metrics due to the DOE Site Office Manager.
10/1/FY	DOE transmits final Performance Metrics to SURA.
4/15/FY	DOE performs mid-year status review.
9/30/FY	Evaluation period ends.
10/31/FY+1	SURA submits Performance Report
11/15/FY+1	DOE develops draft evaluation and transmits to SURA.
12/1/FY+1	SURA submits comments on draft evaluation.
12/15/FY+1	DOE transmits final report to SURA.

Table B.1: Performance Objectives and Their Key Indicators

Objective	Key Indicator	Points
1. Outstanding Science and Technology	Peer Review	300
2. Reliable Operations	Delivered Physics Research Operations	250
3. Production of Scientific and Technical Manpower	• Number of Student Years on Jefferson Lab-Related Research Activities • Total Number of Advanced Degrees Based on Jefferson Lab Research	75
4. Corporate Citizenship	• Public Participation • Non-DOE Investment in Jefferson Lab Initiatives	75
5. Quality Performance in Environment, Health & Safety	• Cost of Injuries • Environmental Permit Exceedences	100
6. Quality of Business and Administrative Practices	Peer Review	100
7. Responsible Institutional Management	Peer Review	100
		1000

1. Outstanding Science and Technology

1A. Overview

Objective: To produce outstanding science and technology.

Key Indicator (300 points):

1.0 Peer Review

General Charge to the Peer Review Panel: Using inputs from other science and technology program managers who sponsor significant work at Jefferson Lab and after consultation with SURA representatives, the DOE Division of Nuclear Physics (DNP) will issue the charge to the panel. Principally the charge will be to evaluate Jefferson Lab's contribution to the goals of the National Nuclear Physics Program, to rate the Jefferson Lab nuclear physics program relative to that of other international laboratories, and to evaluate the likely contributions of the laboratory's proposed future program to this field and to science in general. The panel would also be asked to assess the effectiveness of laboratory operations and the overall scientific productivity of the laboratory.

As part of this charge, the panel would be specifically asked to examine the laboratory's Advanced Accelerator Research and Development efforts and assess whether they are properly focused to support current and future laboratory and national goals. The charge to the panel would also include a request that it evaluate the quality of the laboratory's applied science and technology programs, assess whether the efforts directed toward them by the laboratory are justified, and whether the planned future direction and magnitude of these efforts appear appropriate relative to the primary mission of the laboratory.

In addition, the panel would be requested to evaluate laboratory management's use of discretion (where such discretion exists) in allocating resources among laboratory science and technology priorities and whether prudent judgement was exercised in making such allocations.

More detailed guidance will be developed based on special circumstances at the time of the review.

Frequency and Duration**:** Annually, two days plus one day for report writing and closeout.

Panel Composition: A cross-cutting panel (including a chairperson) of internationally recognized scientists and engineers will be appointed by the DNP following consultation with other program managers who fund significant program activities at the laboratory and with SURA.

Prior to the selection of the panel members, the composition of the panel may be adjusted, by mutual agreement of SURA and DOE, to match the programs and activities of the Laboratory and the special circumstances to be addressed by the review.

Conduct of the Review: The Director of DNP will select a chairperson and develop an agenda for the review based on the charge to the panel in consultation with the chairperson and SURA.

In addition to the panelists appointed by the DNP, the Director of DNP and/or others whom he may designate will also participate in the review as a member of the panel. Consistent with the principles of the DOE--SURA partnership that are expressed in this contract, a SURA representative will be invited to observe the deliberations of the panel and participate in panel discussions, including the executive sessions. This will assist SURA in performing its corporate oversight of the laboratory.

Each panel member will be asked to submit individual reports to the chairperson following the review. The chairperson will submit a report to the Director of DNP that provides his/her personal assessment of the review and the review results and transmits the individual reports from the other panel members.

1B. Performance Evaluation Plan

Introduction:

It is widely accepted that while various numerical indicators can be useful as inputs, the overall scientific and technical quality of a research institution is best judged by peer review. Among the more reliable criteria on which the judgement of the Peer Review Panel should be based are:

1. Quality of the research program as evidenced by seminal experimental or theoretical results.
2. Effectiveness of operations (including an assessment from users) in support of the research program
   Major experimental or technological innovations resulting from work at Jefferson Lab.
3. Citations of papers or articles based on research carried out at Jefferson Lab and invited presentations at major international conferences based on Jefferson Lab results.
4. Other criteria deemed to be relevant will also be examined.

1.0 Peer Review

Scoring: Based on the individual reports of the panel members (including the chairperson), his own assessment, and following consultation with SURA, the Director of the Division of Nuclear Physics will assign an adjectival rating to the performance of the laboratory in producing Outstanding Science and Technology. A percentage of Key Indicator points within the range associated with the assigned rating will be awarded in accordance with the following table.

Adjectival Rating	% of Assigned Points
Outstanding	90 to 100
Excellent	80 to < 90
Good	70 to < 80
Marginal	60 to < 70
Unsatisfactory (Poor)	50 to < 60
Unsatisfactory (Failing)	<50

2. Reliable Operations

2A. Overview

Objective: Achieve reliable performance of the accelerator and detectors at required specifications to ensure the scientific success of the Laboratory.

Key Indicator (150 points):

2.0 Delivered physics research operations, as determined by the number of hours of simultaneous availability of the beams and the experimental equipment delivered.

Secondary Indicators (100 points):

2.1 Beam availability, as defined by the ratio of the time the beam is useful for the intended research program to the time it is scheduled for use during that period. [25 points].

2.2 Experimental equipment availability, as measured by the ratio of the time the equipment is operational at its design specifications in a particular configuration to the time it is scheduled for use in that configuration. [25 points]

2.3 The effectiveness of the scheduling process, as determined by the time that was scheduled to have elapsed between the publication of a firm accelerator schedule and the experiment's scheduled start date divided by the actual time between publication of a firm accelerator schedule and the date an experiment begins taking data. [25 points]

2.4 Overall operations effectiveness, defined as the ratio of the total time the accelerator is operated for physics (in weeks) to the total accelerator operations (in weeks) that was identified as the goal for the year during negotiations of the laboratory's operations budget. [25 points]

2B. Performance Evaluation Plan

Introduction:

Quantitative evaluation of performance in this area is measured against peak performance goals to be declared at the beginning of each evaluation period. A peak performance goal is one that corresponds to the maximum desirable performance in each area given anticipated technical and fiscal constraints. The Laboratory's long range "asymptotic" peak performance goals for each of the performance measures have been set by a joint laboratory-DOE team and will be reviewed by the team on an annual basis. These goals are listed in Table 2.1.

Table 2.1: Long Range Peak Performance Goals

Performance Measure	Indicator	Total Points Assigned	Description	Asymptotic Peak Performance Goal FY2001+
2.0	Delivered Physics Research Operations	150	Hours of physics research operations for which both beam and experimental equipment are simultaneously available	100% of research operations goal
2.1	Beam Availability	25	Percent of the scheduled time for which the beam is useful	80%
2.2	Experimental Equipment Availability	25	Percent of the scheduled time that the experimental equipment is operational	80%
2.3	Effectiveness of the Scheduling Process	25	How closely an experiment actually starts taking data relative to the scheduled start date	100%
2.4	Overall Operations Effectiveness	25	Percent of planned weeks of operations for physics that is delivered	100%

For secondary indicators 2.3 and 2.4, these peak performance goals apply immediately. For secondary indicators 2.1 and 2.2, the annual peak performance goals should reflect the anticipated turn-on curve for operations. Since the peak performance goal for the key indicator 2.0 is a function of secondary indicators 2.1 and 2.2, it too will reflect the anticipated turn-on curve for operations. Thus, the peak performance goals are adjusted as follows:

Table 2.2: Turn-On Peak Performance Goals* (PPG) for Indicators 2.1 and 2.2

Fiscal Year	Peak Performance Goals for Beam Availability (2.1) $A_{accel\text{-}goal}$ (See note below for adjustments)	Peak Performance Goals for Individual Halls included in the Base Experimental Equipment Availability Metric (2.2) $A_{i\text{-}goal}$
FY98	78%	78% (Hall C) 70% (Hall A) 55% (Hall B)
FY99	80%	80% (Hall C) 78% (Hall A) 70% (Hall B)
FY00	80%	80% (Halls A, C) 78% (Hall B)
+FY01-beyond	80%	80% (all Halls)

*before any adjustment for planned new capabilities

Once schedules are established for the three Halls in each year, the Key Indicator 2.0 peak performance goal will be determined by the product of the scheduled hours of beam operations for research, the hall and beam availabilities, and the multiplicity goal (# of halls that are to be operating simultaneously, on average). As the formula for determining the Key Indicator depends on quantities defined for the secondary indicators, we postpone a discussion of the key indicator until later in this section.

The nominal goals for the beam availability peak performance indicator 2.1 and for the individual hall experimental equipment availabilities that are folded together for the experimental equipment availability peak performance indicator 2.2 follow the anticipated curve for the accelerator learning curve (55% in the first year, 70% in the second, 78% in the third, and 80% in the fourth year and beyond). This same learning curve will be applied in the future whenever the accelerator or one of the experimental halls undergoes a major upgrade.

In addition, whenever a significant new capability is being commissioned (e.g., a substantial energy upgrade for the accelerator or a substantial addition to the hall base equipment) then the availability goal for the relevant capability shall be reduced by 10% for one quarter (corresponding to a reduction of 2.5% in the year's PPG for availability). The Lab and the DOE Site Office must both agree on any such reduction in the availability goal as part of the review of the goals at the beginning of the fiscal year. If the development of the new capability is later rescheduled and does not occur within the performance period, the reduction in the availability goal will be rescinded.

In FY00, we anticipate one such substantial upgrade for the accelerator: operation at 6.0 GeV - fully 50% above the design value. Therefore the goal for the accelerator in FY00 is reduced by 10% for one quarter leading to a new goal of: 80% - (0.25 * 10%) = 77.5%. Each of the three experimental halls has major installation work planned in FY00. In Hall A the detector packages will be swapped between the hadron and the electron spectrometers to overcome maximum field limitations of the hadron spectrometer. Hall B will have two major installation experiments this year (the polarized target for eg1 running and the RadPhi experiment - E94-016). Hall C will also have two major installations this year, the HNSS and G^{E}_{n}. As a consequence, the hall availability goals should be reduced: for Hall A by 2.5% and for Halls B and C by 5%. These adjustments lead to the values listed in Table 2.3 below. For FY00, the peak performance goals are therefore:

Table 2.3: Peak Performance Goals for FY00

Indicator	Description	FY00 Peak Performance Goal
2.0	Hours of physics research operations for which both beam and experimental equipment are simultaneously available as scheduled	Calculate using the equation below
2.1	Percent of the scheduled time for which the beam is useful	77.5%
2.2	Percent of the scheduled time that the experimental equipment is operational	Calculate using the equation below and the individual hall availability goals: 75% Hall C ($E_{c\text{-}goal}$) 77.5% Hall A ($E_{a\text{-}goal}$) 73% Hall B ($E_{b\text{-}goal}$)
2.3	How closely an experiment actually starts taking data relative to the scheduled start date	100%
2.4	Percent of the planned weeks of operations for physics that is delivered	100%

For each indicator, the relationship between the percent of peak performance goal that is achieved and the percent of the maximum possible points for that indicator to be awarded will be:

1. If actual performance is at least 50% of agreed peak performance goal:
   % of points awarded = % of peak performance goal achieved (no incremental points are awarded if the performance exceeds the peak performance goal).
2. If actual performance is less than 50% of agreed peak performance goal:
   % of points awarded = 2 * (% of peak performance goal achieved - 25%)
3. If actual performance is less than 25% of agreed peak performance goal:
   No points awarded.

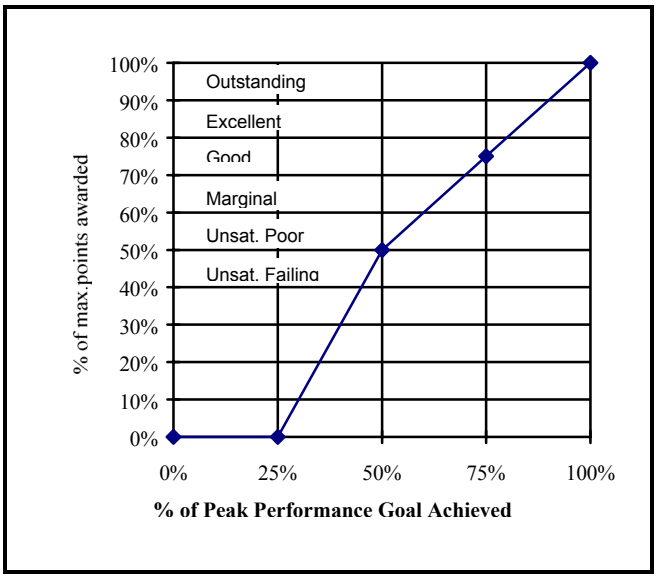


Fig. 2.1: Scoring as a % of Peak Performance Goal Achieved

To precisely quantify the peak performance goals for each performance metric, we begin by making the following definitions:

Table 2.4: Definitions

Quantity	Definition
S_i	The total number of hours assigned in the published schedule for experiments in Hall i
B_i	The beam availability for experiments in Hall i, as determined by the criteria defined below
S_{ad}	The total number of hours of accelerator development activities scheduled for the accelerator
B_{ad}	The beam availability for accelerator development activities as determined by criteria defined below
E_i	The experimental equipment availability for experiments in Hall i as determined by the criteria defined below
D_i	The fraction of the total time scheduled for experiments in Hall i when both the beam and experimental equipment are available and being used to carry out the planned scientific program
D_{ad}	The fraction of the total time scheduled for accelerator development activities that both the beam and the relevant test equipment are available and being used to carry out the planned development activities
t_{bs}	The date on which a firm beam schedule is released
t_{ss}	The date on which an experiment is scheduled to begin taking data as published in the firm beam schedule
t_{sa}	The actual date on which an experiment begins taking data
S_{beam}	The total number of hours in the published schedule that the accelerator is to provide beam for physics experiments
S_j	The total number of hours assigned to the j^{th} experiment in the published schedule

Details on the definitions of these quantities:

B_i, the beam availability for Hall i (where i = a, b, or c), is defined as the ratio of the time the beam is available for delivery to that hall to the time it is scheduled for delivery to that hall. The beam shall be considered as available for the experimental program when the beam quality deliverable to an experimental target lies within the nominal specifications and remains stable within defined limits over a thirty minute running period (see Table 2.5). Different specifications and stability limits may be used for specific experiments if agreed to in advance by both the Accelerator Division and the experiment spokesperson. Specifications for beam availability for accelerator development activities shall be defined in advance by the spokesperson for the development activity and the Accelerator Division.

E_i, the availability of the experimental equipment for hall i (where i = a, b, or c), is defined as the ratio of the time the equipment for that hall is operational at its design specifications in a particular configuration to the time it is scheduled for use in that configuration. The metric will initially consider only the "base" equipment as defined by the Jefferson Lab construction project. As new equipment is added to the base equipment (or as major new experimental apparatus is developed) it shall be treated separately following the availability goals established for the base equipment during its first two years of operation, and treated as part of the base equipment thereafter.

B_{ad}, the beam availability for accelerator development activities, is defined as the ratio of the time the beam is useful for these development activities to the time it is scheduled for such activities. Specifications for beam availability for accelerator development activities shall be defined in advance by mutual agreement between the spokesperson for the development activity and the Accelerator Division.

Table 2.5: Beam Requirements - General Characteristics

Parameter	Nominal Value and Range	Stability (for hours)
Beam Emittance: rms spot size for achromatic beam tune (1σ)	Hall A: 20 μm < σ_x< 50 μm 20 μm < σ_y< 50 μm Hall B: 20 μm < σ_x < 70 μm 20 μm < σ_y < 70 μm Hall C: 50 μm < σ_x < 100 μm 50 μm < σ_y < 100 μm	25% of value
Beam Emittance: angular divergence (1σ)	$\sigma_{x'}$, $\sigma_{y'}$< 100 μr	25% of value
Beam position	0 μm (relative to optic axis)	rms deviation is less than 25% of the beam spot's rms radius
Beam direction	0 μr (relative to optic axis)	rms deviation is less than 25% of the beam angular divergence rms 1/2 cone angle
Energy (average)	0.5 - 4 GeV	Hall A: < 3 E-4 Hall B: < 1 E-3 Hall C: < 1 E-3 (also < 3 E-3 over days for all)
Energy Spectrum (1σ)	Hall A: σ_E/E < 5 E-5 Hall B: σ_E/E < 4.0 E-4 Hall C: σ_E/E < 2.5 E-4	25% of value
Background (Beam Halo)	< 1E-6 of total current at 5σ (with diagnostic to be provided by the experiment)	any value within nominal range
Current (dc average) (Note: any single hall is restricted to <120 μA unless it has exclusive use of the beam, and total current delivered to all 3 halls must be <180 μA)	Hall A: 40 nA – 180 μA Hall B: 1 nA – 10 μA Hall C: 40 nA – 180 μA	within ± 10% of value requested by experimenter

Polarization (current range to be determined by agreement between Physics and Accelerator Divisions)	>35% (from bulk GaAs, with expected currents of order 100 μA) >75% (from strained cathodes, with currents of order 30 μA expected)	± 10% of value
Effective Duty Factor	>90% (lower values may be negotiated with the Accelerator Division)	any value within the nominal range (90%-100%)
Proper Impingement on Beam Dump (raster)	rastered beam spot size > 100 μm stability of position < 1 cm (not including rastering)	

Scoring:

2.0 Delivered Physics Research Operations, $S_{physics\text{-}research}$, as determined by the number of hours of simultaneous availability of the beam and the experimental equipment. [150 points]

FY00 Peak Performance Goal (PPG): $S_{physics\text{-}research\text{-}goal} = S_{beam}\, A_{sim\text{-}goal}\, M_{goal}$ (hours)

Where $A_{sim\text{-}goal} = A_{accel\text{-}goal}\, E_{t\text{-}goal}$, the product of the goals for accelerator and experiment equipment availability, and M_{goal} is the goal for hall multiplicity, i.e., the average number of halls that are running any time the accelerator beam is available for physics. The product $S_{beam}\, A_{sim\text{-}goal}$ gives the number of hours of useful physics running that the accelerator and experimental equipment would deliver if both beam and experimental equipment availability goals were met (and assuming that there are no correlations in the causes of down-time for the accelerator and the experimental equipment). M_{goal} is nominally 2.0, reflecting our goal of running, on average, two halls simultaneously. The value of 2.0 is mainly based on a realistic assessment of the achievable multiplicity given the level of technical support available at the laboratory to assist in mounting and running experiments and our typical planning for major experiment installations each year. The multiplicity goal may be adjusted annually as part of the negotiations between DOE and laboratory management on the year's operating budget and staff levels.

In addition, M_{goal} will be reduced in any year that one or more of the halls are planned to be "down" for an unusual length, e.g., for a major upgrade of the apparatus or the installation of major new apparatus. There are no such reductions anticipated for FY00.

This is to be compared with the actual physics research operations, given by:

$$S_{physics\text{-}research} = S_a D_a + S_b D_b + S_c D_c \text{ (hours)}$$

If actual performance is at least 50% of agreed PPG, then % of points awarded = % of PPG achieved. No points are awarded if actual performance is less than 25% of agreed PPG.

Performance Level	Adjectival Rating	% of Assigned Points
90% to 100% of PPG	Outstanding	90 to 100
80% to < 90% of PPG	Excellent	80 to < 90
70% to < 80% of PPG	Good	70 to < 80
60% to < 70% of PPG	Marginal	60 to < 70
50% to < 60% of PPG	Unsatisfactory (Poor)	50 to < 60
25% to < 50% of PPG	Unsatisfactory (Failing)	2 * (% of PPG achieved - 25%)

2.1 The total beam availability, B_t, is the weighted average over the experimental and beam development activities scheduled of the beam availabilities for the individual experimental halls and for accelerator development activities. [25 points]

FY00 Peak Performance Goal (PPG): 75%

$B_t = (B_aS_a + B_bS_b + B_cS_c + B_{ad}S_{ad})/(S_a + S_b + S_c + S_{ad})$

If actual performance (B_t) is at least 50% of agreed PPG, then % of points awarded = % of PPG achieved. No points are awarded if actual performance is less than 25% of agreed PPG.

Performance Level	Adjectival Rating	% of Assigned Points
90% to 100% of PPG	Outstanding	90 to 100
80% to < 90% of PPG	Excellent	80 to < 90
70% to < 80% of PPG	Good	70 to < 80
60% to < 70% of PPG	Marginal	60 to < 70
50% to < 60% of PPG	Unsatisfactory (Poor)	50 to < 60
25% to < 50% of PPG	Unsatisfactory (Failing)	2 * (% of PPG achieved - 25%)

2.2 The total availability of the base experimental equipment, E_t, is the average over all halls scheduled of the beam availabilities for the individual halls. [25 points]

FY00 Peak Performance Goal (PPG):

$E_{t\text{-}goal} = (E_{a\text{-}goal}S_a + E_{b\text{-}goal}S_b + E_{c\text{-}goal}S_c)/(S_a + S_b + S_c)$

and is calculated based on the published schedule for hall operations and the goals, $E_{i\text{-}goal}$, for the individual hall availabilities as listed in Table 2.3 above.

The actual availability to be compared with the goal above is:

$E_t = (E_aS_a + E_bS_b + E_cS_c)/(S_a + S_b + S_c)$

If actual performance (E_t) is at least 50% of agreed PPG ($E_{t\text{-}goal}$), then % of points awarded = % of PPG achieved. No points are awarded if actual performance is less than 25% of agreed PPG.

Performance Level	Adjectival Rating	% of Assigned Points
90% to 100% of PPG	Outstanding	90 to 100
80% to < 90% of PPG	Excellent	80 to < 90
70% to < 80% of PPG	Good	70 to < 80
60% to < 70% of PPG	Marginal	60 to < 70
50% to < 60% of PPG	Unsatisfactory (Poor)	50 to < 60
25% to < 50% of PPG	Unsatisfactory (Failing)	2 * (% of PPG achieved - 25%)

2.3 The effectiveness of the scheduling process, ε_{sched}, is the average performance with respect to start times for all experiments on the published, "firm" schedule, weighted according to the scheduled duration, S_j, of each experiment, of the ratio, R_j, of the actual start time to the scheduled start time for the j^{th} experiment. [25 points]

FY00 and beyond Peak Performance Goal (PPG): 100%

$\varepsilon_{sched} = (\Sigma S_j R_j)/(\Sigma S_j)$, where $R_j = (t_{ss} - t_{bs})/(t_{sa} - t_{bs})|_j$

If actual performance (ε_{sched}) is at least 50% of agreed PPG, then % of points awarded = % of PPG achieved. No points are awarded if actual performance is less than 25% of agreed PPG.

Performance Level	Adjectival Rating	% of Assigned Points
90% to 100% of PPG	Outstanding	90 to 100
80% to < 90% of PPG	Excellent	80 to < 90
70% to < 80% of PPG	Good	70 to < 80
60% to < 70% of PPG	Marginal	60 to < 70
50% to < 60% of PPG	Unsatisfactory (Poor)	50 to < 60
25% to < 50% of PPG	Unsatisfactory (Failing)	2 * (% of PPG achieved - 25%)

Notes:
1) The basic schedule will be issued every six months; it will confirm the remainder of the "firm" schedule which has been in progress for the preceding three months and announce the firm schedule for a period extending to nine months from the date of issue and the tentative schedule for six months following the announced firm schedule.
2) Schedule changes requested by the experimenter or deemed mutually beneficial to both the experimenter and the laboratory shall be treated as if the changed date was listed in the original schedule for the purposes of calculating this sum.

2.4 Overall operations effectiveness, ε_{ops}, defined as the ratio of the total time the accelerator is operated for physics (in weeks) to the total accelerator operations (in weeks) that was identified as the joint expectation for the year during negotiations of the laboratory's operations budget. [25 points]

FY00 and beyond Peak Performance Goal (PPG): 100%

ε_{ops} = (weeks of accelerator operations for physics)/(weeks for accelerator ops in contract)

If actual performance (ε_{ops}) is at least 50% of agreed PPG, then % of points awarded = % of PPG achieved. No points are awarded if actual performance is less than 25% of agreed PPG.

Performance Level	Adjectival Rating	% of Assigned Points
90% to 100% of PPG	Outstanding	90 to 100
80% to < 90% of PPG	Excellent	80 to < 90
70% to < 80% of PPG	Good	70 to < 80
60% to < 70% of PPG	Marginal	60 to < 70
50% to < 60% of PPG	Unsatisfactory (Poor)	50 to < 60
25% to < 50% of PPG	Unsatisfactory (Failing)	2 * (% of PPG achieved - 25%)

3. Production of Scientific and Technical Manpower

3A. Overview

Objective: Jefferson Lab will contribute to the education and training of the future scientific/ technical work force for the nation, emphasizing meaningful, unique research experiences at the forefront in its areas of physics and engineering and also emphasizing increasing the qualifications of underrepresented populations for scientific/technical careers.

Key Indicator (60 points):

3.0a Number of student years per year on Jefferson Lab-related research or technical activities. [35 points]

3.0b Total number of advanced degrees per year based on Jefferson Lab research. [25 points]

Secondary Indicators (15 points):

3.1 Number of advanced degrees per year granted by minority universities and based on Jefferson Lab research. [5 points]

3.2 Participation of students from groups traditionally underrepresented in physical science and engineering fields. [10 points]

3B. Performance Evaluation Plan

3.0a Number of student years per year on Jefferson Lab-related research or technical activities. [35 points]

Methodology

The data collection process involves two major components: the administration of a Jefferson Lab Users Group Survey and a cross-check against the University Relations student inventory list. Surveys are sent to the complete Users Group. An initial response rate of 10-20% of the group of active users is considered reasonable. However, to understand the nature of the full population, a follow-up survey of one in 15 non-respondents will be conducted. This follow-up survey attempts to capture non-respondents who ignored the initial survey because they thought it was irrelevant to them, but who have valid data that would more accurately reflect the population. Best estimates for user student population are obtained by supplementing the actual student numbers from the initial survey respondents with the expected number of unreported students based on the 1-in-15 follow-up survey. The follow-up survey of one in 15 non-respondents is a modification from the FY97 methodology where follow-up surveys were conducted with one in 30 non-respondents. The accuracy of the data will be improved with this modification.

Scoring: Tally the number for each high school, undergraduate, and graduate student involved in Jefferson Lab-related research or technical activities (including computing) at Jefferson Lab and collaborating institutions and apply the following equation:

WSII (Weighted Student Involvement Index) = 1HSS + 2UGS + 4GS
where HSS = High School Students, UGS = Undergraduate Students, and GS = Graduate Students

Performance Level	Adjectival Rating	% of Assigned Points
WSII ≥ 1000 and < 1075	Outstanding	90 to 100
WSII ≥ 925 and <1000	Excellent	80 to < 90
WSII ≥ 850 and < 925	Good	70 to < 80
WSII ≥ 775 and <850	Marginal	60 to < 70
WSII < 775	Unsatisfactory	<60

3.0b Total number of advanced degrees per year based on Jefferson Lab research. [25 points]

Methodology

To estimate the total number of advanced degrees, initially reported and known degrees are supplemented with the expected numbers of unreported degrees based on the number of unreported students and the base of the reported students obtaining such degrees.

Scoring: Tally the number of Master's Degrees and PhD's awarded for research based at Jefferson Lab or involving strong interaction with Jefferson Lab and apply the following equation:

CD (Composite Degrees) = MD + 3PHD

where MD = Number of awarded Master's degrees and PHD = Number of awarded PhD's

Performance Level	Adjectival Rating	% of Assigned Points
CD ≥ 45 and < 53	Outstanding	90 to 100
CD ≥ 38 and < 45	Excellent	80 to < 90
CD ≥ 30 and < 38	Good	70 to < 80
CD ≥ 23 and <30	Marginal	60 to < 70
CD < 23	Unsatisfactory	<60

3.1 Number of advanced degrees per year granted by minority universities based on Jefferson Lab research. [5 points]

Methodology
Degrees awarded by minority institutions are collected directly. Participation by underrepresented populations are based on the percentages from the initial survey data.

Scoring: See 3.0b scoring scheme, but count degrees granted by minority institutions only (HBCU, MEI, women's college) and apply the following equation:

CDM (Composite Degrees Minority = MD + 3PHD
where MD = Number of awarded Master's degrees and PHD = Number of awarded PhD's

Performance Level	Adjectival Rating	% of Assigned Points
CMD ≥ 6	Outstanding	100
CMD ≥ 4 and < 6	Excellent	85
CMD ≥ 2 and < 4	Good	75
CMD = 1	Marginal	65
CMD = 0	Unsatisfactory	55

3.2 Participation of students from groups traditionally underrepresented in physical science and engineering fields. [10 points]

Scoring: Determine the MWSII (Minority Weighted Student Involvement Index) for women or underrepresented minorities.

MWSII = 1MHSS + 2MUGS +4MGS

Where: MHSS = Women or Minority High School Students;
MUGS = Women or Minority Undergraduate Students; and,
MGS = Women or Minority Graduate Students

Students who qualify for more than one category can be counted more than once.

Performance Level	Adjectival Rating	% of Assigned Points**
MWSII ≥ 323 and ≤ 376*	Outstanding	90 to 100
MWSII ≥ 269 and < 323	Excellent	80 to < 90
MWSII ≥ 215 and < 269	Good	70 to < 80
MWSII ≥ 161 and < 215	Marginal	60 to < 70
MWSII ≥ 107 and < 161	Unsatisfactory (Poor)	50 to < 60
MWSII < 107	Unsatisfactory (Failing)	0 to < 50

* Performance level greater than 376 receive 100% of assigned points.

** Percent of assigned points identified in the table can be calculated directly by the following formulas:

% of points = (((MWSII – lowest number in Performance Level) / 53) * 10) + lowest number in % of Assigned Points for MWSII ≥ 107

% of points = (1 – ((106 – MWSII) / 106))) * 49 for MWSII < 107

4. Corporate Citizenship

4A. Overview

Objective: As a taxpayer-funded institution, Jefferson Lab should serve the public and the national interest in important areas where it has special competencies which are mission related.

PUBLIC OUTREACH AND IMPROVED SCIENTIFIC LITERACY (35 points).

Objective: Scientific literacy and support are essential for the public to make competent decisions on everyday matters of increasingly complex technical nature. Science and math education are important for today's students if they are to complete high school prepared for college or a worthwhile career. As a workplace where science and math are in the forefront, Jefferson Lab can provide unique educational and motivational opportunities and materials. Public awareness of Jefferson Lab and its DOE-sponsorship is also essential for the future well being of the laboratory and the national science enterprise.

Key Indicator (20 points)

4.0 Public participation (in effective person-hours per year): [Number of student hours + number of public hours + 10 * number of teacher hours] per year, including visits, external public talks, science series, tours, open house, BEAMS, etc.

Secondary Indicators (15 points)

4.1 Public visibility: Number of newspaper and magazine articles, Web-based news systems, and radio and television programs mentioning Jefferson Lab and its science or technology (7 points); percentage of these citations mentioning DOE (3 points). [10 points total]

4.2 "Customer satisfaction" [5 points]

TECHNOLOGY TRANSFER (40 points)

Objective: The objective of the Jefferson Lab technology transfer program is the dissemination of key technologies to industry that are developed as result of Jefferson Lab's primary scientific mission and that are of interest to industry.

Key Indicator (20 points)

4.3 Non-DOE investment in Jefferson Lab initiatives (including direct dollars, manpower costs, and contributions in-kind)

Secondary Indicators (20 points)

4.4 Intellectual property generation as indicated by the annual number of (a) patent applications, (b) patents awarded, (c) license agreements. [10 points]

4.5 Benefit to partners based on the results of a mutually agreed customer survey where the customer indicates level of satisfaction on a 1 (lowest) to 5 (highest) scale. [10 points]

4B. Performance Evaluation Plan

PUBLIC OUTREACH AND IMPROVED SCIENTIFIC LITERACY [35 points]

Introduction:

Jefferson Lab's effect on public awareness and literacy is strongest when people have direct personal contact with laboratory personnel and facilities. The typical minimum time to influence a person's awareness and literacy of things that are outside his/her area of expertise is about an hour, and significant learning can occur in this period. Teachers learn not just for themselves but to pass on information and concepts to their students. Typical teachers contact 25-100 students per year, but the literacy transfer to the students is likely to be lower than it would be if the students participated in the Jefferson Lab experience directly. Consequently, the multiplier 10 for teacher participation is a conservative adjustment for the true outreach/literacy impact.

4.0 Public participation (in effective person-hours per year): [Number of student hours + number of public hours + 10 * number of teacher hours] per year, including visits, external public talks, science series, tours, open house, BEAMS, etc. [20 points]

Scoring: Count or estimate the number (N_i) of participants or attendees in each event (i). Measure the duration (t_i) in hours of the activity, event, or the typical person's involvement. People counted under Scientific Manpower do not count here; high school students doing research do not count.

Calculate the public participation metric (P)

$$P = \sum_i N_i t_i \quad \text{for all events}$$

Peak Performance Goal (PPG):
Good faith efforts will be made to ensure N_i is accurate within 10%; t_i will be measured to the nearest half hour. For FY 2000 Jefferson Lab's Peak Performance Goal (PPG) will be:

-105,000 person-hours broken down as:

- Science and Education - students, teachers, parents - 95,000*
- Public Outreach - 10,000

- Note: If the TRAC program is not funded by DOE, this number will be reduced by 25,000 to 80,000 person-hours overall and 70,000 person-hours for science education. The corresponding ratings will be:

Performance Level	Adjectival Rating	% of Assigned Points†
90% to 100% of PPG	Outstanding	90 to 100
80% to < 90% of PPG	Excellent	80 to < 90
70% to < 80% of PPG	Good	70 to < 80
60% to < 70% of PPG	Marginal	60 to < 70
50% to < 60% of PPG	Unsatisfactory (Poor)	50 to < 60
0% to < 50% of PPG	Unsatisfactory (Failing)	0 to < 50

† In each adjectival category, points are assigned by linear interpolation between the ranges listed.

4.1 (a) Public visibility: Number of newspaper and magazine articles, Web-based news systems, and radio and television programs mentioning Jefferson Lab and its science or technology (7 points); (b) percentage of these citations mentioning DOE (3 points). [10 points total]

Scoring:

a) Public Visibility "V" [7 points]

$V = \Sigma Wi$ $Wi = Ci + Di$ i = each article, radio or TV appearance

Circulation Weighting Factors (Ci)		Distribution Factor	(Di)
<10,000	1	Local inside SE Virginia	0
10,000-50,000	2	Local outside SE Virginia	+1
50,000-250,000	3	Regional	+1
>250,000	4	National	+2
		International	+3

Regional is defined as Washington DC, Maryland, West Virginia, Tennessee and North Carolina.

The number counted will be ≤ the number occurring, because we would not necessarily be aware of all coverage. If one article is repeated in many publications, add the audience circulation factor and the distribution factors for each. Each article in a series of articles will be counted individually.

Peak Performance Goal (PPG): For FY 2000 Jefferson Lab's Peak Performance Goal will be 400. Scoring will be determined using the values in the following table.

Performance Level	Adjectival Rating	% of Assigned Points†
90% to 100% of PPG	Outstanding	90 to 100
80% to < 90% of PPG	Excellent	80 to < 90
70% to < 80% of PPG	Good	70 to < 80
60% to < 70% of PPG	Marginal	60 to < 70
50% to < 60% of PPG	Unsatisfactory (Poor)	50 to < 60
0% to < 50% of PPG	Unsatisfactory (Failing)	0 to < 50

† In each adjectival category, points are assigned by linear interpolation between the ranges listed.

b) DOE Citation. [3 points]

Percent mentioning DOE: Count the articles, broadcasts, exhibits, interviews and videos (A) initiated by Jefferson Lab which feature the laboratory and the subset (S) of those communications in which the Laboratory mentions DOE. In the case where the Laboratory mentions "DOE" in a proposed article or broadcast and the final version is revised or altered by the media, the Laboratory will receive credit for the article or broadcast since the Laboratory has no control over the final version. Percent = 100 S/A. The score is as follows:

Performance Level	Adjectival Rating	% of Assigned Points†
90% to 100%	Outstanding	90 to 100
80% to < 90%	Excellent	80 to < 90
70% to < 80%	Good	70 to < 80
60% to < 70%	Marginal	60 to < 70
50% to < 60%	Unsatisfactory (Poor)	50 to < 60
0% to < 50%	Unsatisfactory (Failing)	0 to < 50

† In each adjectival category, points are assigned by linear interpolation between the ranges listed.

4.2 Customer satisfaction. [5 points]

Scoring: Normalize all feedback from customers (overall ratings) for selected events and activities [to be determined by the laboratory and the DOE Site Office], with average or neutral being 70. Average all available event scores. For public participation events, at least 15% of the total number of participants will be surveyed. This fraction should be representative of a reasonable cross-section of all such public events. For education events, at least 80% of the participants will be surveyed.

Each customer indicates a level of satisfaction on a 1 (lowest) to 5 (highest) scale for each event. After each event, average is calculated, average the event averages resulting in one overall average (A). Normalize the average (A) according to the following formula:

N_A=Normalized Average (A) = [(A - 1)*15] + 40

Performance Level (N_A)	Adjectival Rating	% of Assigned Points†
90 to 100	Outstanding	90 to 100
80 to < 90	Excellent	80 to < 90
70 to < 80	Good	70 to < 80
60 to < 70	Marginal	60 to < 70
50 to < 60	Unsatisfactory (Poor)	50 to < 60
40 to < 50	Unsatisfactory (Failing)	0 to < 50

† In each adjectival category, points are assigned by linear interpolation between the ranges listed.

TECHNOLOGY TRANSFER (40 points)

4.3 Non-DOE investment in Jefferson Lab initiatives (including direct dollars, manpower costs, and contributions in-kind) [20 points]

Scoring:

Performance Level	Adjectival Rating	Assigned Points†
Non-DOE Investment 2% to 2.5% of Jefferson Lab ops budget	Outstanding	18 to 20
" " 1.5% to < 2% " "	Excellent	16 to < 18
" " 1% to < 1.5% " "	Good	14 to < 16
" " 0.5% to < 1% " "	Marginal	12 to < 14
" " 0.25% to < 0.5% " "	Unsatisfactory (Poor)	10 to < 12
" " < 0.25% " "	Unsatisfactory (Failing)	0 to < 10

† In each adjectival category, points are assigned by linear interpolation between the ranges listed.

4.4 Intellectual property generation as indicated by the annual number of [10 points]:
(a) patent applications
(b) patents awarded
(c) license agreements

Scoring:

Performance Level	Adjectival Rating	Assigned Points
Two license granted or one patent award or 5 or more patent applications executed	Outstanding	10
4 patent applications executed	Excellent	8
3 patent applications executed	Good	6
2 patent applications executed	Marginal	4
1 patent application executed	Unsatisfactory (Poor)	2
0 patent application executed	Unsatisfactory (Failing)	0

4.5 Benefit to partners based on the results of a mutually agreed customer survey where the customer indicates level of satisfaction on a 1 (lowest) to 5 (highest) scale. [10 points]

Scoring:

Performance Level (Average Rating on Customer Survey)	Adjectival Rating	% of Assigned Points†
4.0 to 5.0	Outstanding	90 to 100
3.5 to < 4.0	Excellent	80 to < 90
3.0 to < 3.5	Good	70 to < 80
2.5 to < 3.0	Marginal	60 to < 70
2.0 to < 2.5	Unsatisfactory (Poor)	50 to < 60
0.0 to < 2.0	Unsatisfactory (Failing)	0 to < 50

† In each adjectival category, points are assigned by linear interpolation between the ranges listed.

5. Quality Performance in Environment, Health, and Safety

5.A Overview

Objective: Protection of workers, the public and the environment, adherence to the ALARA concept, and compliance with laws, regulations, statutory requirements, and appropriate national initiatives (recycling, waste reduction, etc.) at lowest reasonable cost.

Key Indicators (55 Points)

5.0a Cost index: 100 * ($1,000,000 * fatalities + $500,000 * permanent transfers or terminations due to occupational illness or injury + 2,000 * lost workday cases + 1,000 * days away from work + 400 * restricted workdays + 2,000 * number of non-fatal cases without days away from work or restricted workdays) / total work-hours. [35 points]

5.0b Jefferson Lab environmental exceedances per fiscal year. [20 points]

Secondary Indicators (45 points)

5.1 Jefferson Lab lost work day case rate (cases per 100 person years worked). [15 points]

5.2a Number of reportable and recordable exposures to radiation as off-normal occurrences, plus 5 times this number for unusual occurrences. [4 points]

5.2b Number of reportable and recordable exposures to hazardous substances as off-normal occurrences, plus 5 times this number for unusual occurrences. [4 points]

5.3 Solid waste recycled, in tons, divided by (solid waste sent to landfill, in tons + solid waste recycled, in tons). [6 points]

5.4a Pounds of radioactive waste produced by (equipment upgrades + maintenance) divided by pounds of radioactive waste produced by (equipment upgrades + maintenance + unintentional processes). [4 points]

5.4b Pounds of hazardous waste produced divided by pounds of hazardous waste which would have been produced without countermeasures. [4 points]

5.5 Peer review of Emergency Management Program in odd-numbered fiscal years, and of Radiological Control Program in even-numbered fiscal years. [4 points]

5.6 Fraction of high-value facilities rated “Highly Protected Risk.” [4 points]

5B. Performance Evaluation Plan

5.0a Cost index: 100 * ($1,000,000 * fatalities + $500,000 * permanent transfers or terminations due to occupational illness or injury + 2,000 * lost workday cases + 1,000 * days away from work + 400 * restricted workdays + 2,000 * number of non-fatal cases without days away from work or restricted workdays) / total work-hours. [35 points]

Introduction:

Goal: To achieve a performance level which is 50% better than the DOE Lab average.

Qualifiers:

- Comprises all SURA/Jefferson Lab staff
- Includes official travel
- Includes personnel paid under joint salary arrangements

Data collection: EH&S Reporting

Data evaluation: EH&S Reporting

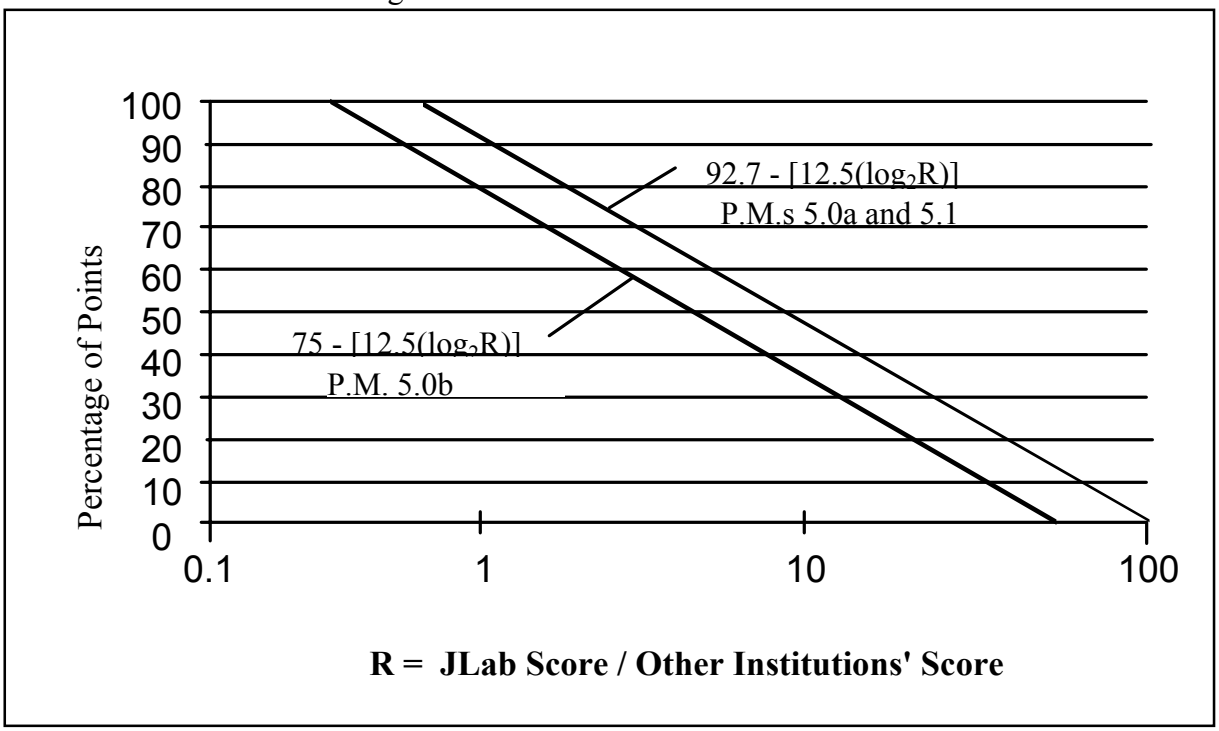
Performance measure custodian: EH&S Reporting

Performance measurement validation: Relevant information is presently collected.

Scoring: Based on ratio R of Jefferson Lab's performance during the rating (fiscal) year to the average of DOE Research Contractors for the immediately preceding calendar year, as shown in Table S3 of the publication "DOE Occupational Injury and Property Damage Summary." Note that if 1/R=1.50, then the Laboratory's goal is met and 100% of the available points are awarded. Other scores are illustrated in the following Table; Figure 5.1 on the following page shows the logarithmic interpolation between performance levels listed in the Table:

Performance Level (R)	Adjectival Rating	% of Assigned Points [92.7 -12.5($\log_2$R)]
1.162 to 0.667	Outstanding	90 to 100
2.022 to 1.162	Excellent	80 to <90
3.521 to 2.022	Good	70 to <80
6.130 to 3.521	Marginal	60 to <70
10.67 to 6.130	Unsatisfactory (Poor)	50 to <60
170.8 to 10.67	Unsatisfactory (Failing)	0 to <50

Figure 5.1: Points awarded v. the ratio



5.0b Jefferson Lab environmental exceedances per fiscal year. [20 points]

Introduction:

Goal: To achieve a performance level which is 4 times as good as the DOE complex average.

Qualifiers:

- Violation points for purely administrative violations caused by late reporting of routine information to the regulatory agency may be waived (for purposes of this performance measure) by agreement of SURA and the DOE Site Office if SURA had all necessary information to the Site Office at least two working days before it was due.
- Violation points for multiple related concurrent violations will be treated as a single violation.
- Occurrence Reporting and Processing System (ORPS) thresholds are as defined in order 232.1 dated 9/25/95.

Data collection: EH&S Reporting, receiving information from the Site Office

Data evaluation: EH&S Reporting

Performance measure custodian: EH&S Reporting

Performance measurement validation: Relevant information is presently collected. Site Office is the permit holder, and receives information directly on Jefferson Lab environmental exceedances.

Scoring: Jefferson Lab's current performance is evaluated against a permanent baseline of DOE-wide performance for CY 1995. Performance level is based on the ratio R of Jefferson Lab's performance per FTE to the DOE-wide environmental exceedances performance per FTE, using CY 1995 (as extracted from EH-33 special survey).

Values assigned as follows:

- A ".1" environmental exceedance for a purely administrative violation that is reportable under the ORPS.
- A ".3" environmental exceedance for an environmentally significant violation that results in no long-term (typically less than 30 days) environmental damage, but the violation is ORPS reportable.
- A "1.0" environmental exceedance for a violation that has a significant environmental impact of $\geq$ 30 days and is ORPS reportable.

The sum of these values is divided by the Jefferson Lab FTEs and compared to the permanent DOE baseline to develop the ratio, R. Note that if 1/R=4, then the Laboratory's goal is met and 100% of the available points are awarded. Other scores are illustrated in the following Table; Figure 5.1 shows the logarithmic interpolation between performance levels listed in the Table:

Performance Level (R)	Adjectival Rating	% of Assigned Points [75-12.5($\log_2$R)]
.436 to .25	Outstanding	90 to 100
.758 to .436	Excellent	80 to <90
1.32 to .758	Good	70 to <80
2.30 to 1.32	Marginal	60 to <70
4.0 to 2.30	Unsatisfactory (Poor)	50 to <60
64.0 to 4.0	Unsatisfactory (Failing)	0 to <50

5.1 Jefferson Lab lost work day case rate (cases per 100 person years worked). [15 points]

Introduction:

Goal: To achieve a performance level which is 50% better than the DOE Lab average.

Qualifiers:

- Comprises all SURA/Jefferson Lab staff
- Includes official travel
- Includes personnel paid under joint salary arrangements

Data collection: EH&S Reporting

Data evaluation: EH&S Reporting

Performance measure custodian: EH&S Reporting

Performance measurement validation: Relevant information is presently collected.

Scoring: Based on ratio R of Jefferson Lab's performance during the rating (fiscal) year to the average of DOE Research Contractors for the immediately preceding calendar year, as shown in Table S3 of the publication "DOE Occupational Injury and Property Damage Summary." Note that if 1/R=1.50, then the Laboratory's goal is met and 100% of the available points are awarded.

Other scores are illustrated in the following Table; Figure 5.1 shows the logarithmic interpolation between performance levels listed in the Table:

Performance Level (R)	Adjectival Rating	% of Assigned Points [92.7 - 12.5($\log_2$R)]
1.162 to 0.667	Outstanding	90 to 100
2.022 to 1.162	Excellent	80 to <90
3.521 to 2.022	Good	70 to <80
6.130 to 3.521	Marginal	60 to <70
10.67 to 6.130	Unsatisfactory (Poor)	50 to <60
170.8 to 10.67	Unsatisfactory (Failing)	0 to <50

5.2a Number of reportable and recordable exposures to radiation as off-normal occurrences, plus 5 times this number for unusual occurrences. [4 points]

Introduction:

Goal: To have a satisfactory ALARA program, with no exposures > 80% of the ORPS off-normal threshold.

Qualifiers:

- Includes everyone on site (including adjacent space leased by SURA and those personnel covered by the Jefferson Lab radiation dosimetry program)
- Only the worst exposure is counted in an event involving radiation exposure.
- Excludes exposures pre-approved in accordance with the Rad Con Manual.
- ORPS thresholds are as defined in order 232.1, dated 9/25/95.

Data collection: Radiological Control reports the information to EH&S Reporting

Data evaluation: EH&S Reporting

Performance measure custodian: EH&S Reporting

Performance measurement validation: Relevant information is presently collected.

Scoring: Based directly on exposures and program evaluation. Values assigned as follows:

- 0.00 for ALARA program rated better than satisfactory in the most recent internal evaluation (performed by the Radiological Control Manager during the preceding 12 months).
- 0.01 for ALARA program rated satisfactory in the most recent internal evaluation.
- 0.1 for ALARA program rated less than adequate in the most recent internal evaluation.
- 0.5 for an event in which the worst whole body exposure is above 80% but below 100% of the ORPS off-normal threshold.
- 1.0 for an event in which the worst whole body exposure is above the ORPS off-normal threshold but below the unusual occurrence threshold.
- 5.0 for an event in which the worst whole body exposure is above the ORPS unusual occurrence threshold.

Performance Level is given by the sum (S) of these values.

Performance Level (S)	Adjectival Rating	% of Assigned Points†
< 0.1 to 0.01	Outstanding	90 to 100
0.5 to 0.1	Excellent	80 to <90
1.0 to > 0.5	Good	70 to <80
5.0 to > 1.0	Marginal	60 to <70
10.0 to > 5.0	Unsatisfactory (Poor)	50 to <60
> 10.0	Unsatisfactory (Failing)	0 to <50

† In each adjectival category, points are assigned by linear interpolation between the ranges listed except performance levels >10.0 are scored by logarithmic extrapolation from Marginal and Unsatisfactory (Poor).

5.2b Number of reportable and recordable exposures to hazardous substances as off-normal occurrences, plus 5 times this number for unusual occurrences. [4 points]

Introduction:

Goal: To have no exposures above an OSHA action level.

Qualifiers:

- Includes everyone on site (including adjacent space leased by SURA)
- ORPS thresholds are as defined in order 232.1, dated 9/25/95.
- No more than three exposures are counted in a single incident.

Data collection: Industrial Hygiene Staff report the information to EH&S Reporting

Data evaluation: EH&S Reporting

Performance measure custodian: EH&S Reporting

Performance measurement validation: Relevant information is presently collected.

Scoring: Based on exposures. Values assigned as follows:

- 0.1 for an exposure above an OSHA action level, but less than the ORPS off-normal threshold (2 times the OSHA permissible exposure level).
- 1.0 for an exposure above the ORPS off-normal threshold, but below the unusual occurrence threshold.
- 5.0 for an exposure above the unusual occurrence threshold (5 times the OSHA permissible exposure level).

Performance Level is given by the sum (S) of these values

Performance Level (S)	Adjectival Rating	% of Assigned Points†
0.5 to 0.0	Outstanding	90 to 100
1.0 to > 0.5	Excellent	80 to <90
4 to > 1.0	Good	70 to <80
16 to > 4	Marginal	60 to <70
35 to > 16	Unsatisfactory (Poor)	50 to <60
> 35	Unsatisfactory (Failing)	0 to <50

† In each adjectival category, points are assigned by linear interpolation between the ranges listed except performance levels >35 are scored by logarithmic extrapolation from Marginal and Unsatisfactory (Poor).

5.3 Solid waste recycled, in tons, divided by (solid waste sent to landfill, in tons + solid waste recycled, in tons). [6 points]

Introduction:

Goal: To exceed the FY94 baseline recycling ratio (0.021) by 44%.

Qualifiers:

- Includes solid waste in dumpsters on the Jefferson Lab site.
- Includes solid waste picked up for recycling from the Jefferson Lab site.
- Weights are measured by the subcontractors as part of the subcontract requirements.
- Additional waste streams may be added if they are found to be significant.

Data collection: The solid waste and recycling subcontractors report the information to Plant Engineering, which consolidates the data and forwards it to EH&S Reporting.

Data evaluation: EH&S Reporting

Performance evaluation: EH&S Reporting

Performance measurement validation: Relevant information is presently collected.

Scoring: Based directly on current year's recycling ratio.

Performance Level (Ratio)	Adjectival Rating	% of Assigned Points†
0.026 to ≤ 0.030	Outstanding	90 to 100
0.020 to < 0.026	Excellent	80 to <90
0.010 to < 0.020	Good	70 to <80
0.005 to < 0.010	Marginal	60 to <70
0.002 to < 0.005	Unsatisfactory (Poor)	50 to <60
< 0.002	Unsatisfactory (Failing)	0 to <50

† In each adjectival category, points are assigned by linear interpolation between the ranges listed except performance levels <0.002 are scored by logarithmic extrapolation from Marginal and Unsatisfactory (Poor).

5.4a Pounds of radioactive waste produced by (equipment upgrades + maintenance) divided by pounds of radioactive waste produced by (equipment upgrades + maintenance + unintentional processes). [4 points]

Introduction:

Goal: To limit generation of radioactive waste by unintentional processes to 10% of total radioactive waste generated.

Qualifiers:

- Equipment upgrades includes the removal of equipment which is no longer in use.
- Maintenance includes repairs necessitated by spontaneous failures.
- Unintentional processes exclude radioactive waste caused by spontaneous failures.
- Only accelerator and experimental equipment components are included.
- Unintentional processes include thermal damage caused by the beam and mechanical damage, plus other processes only if the information is available to theRadiological Control Group without investigation by that group.
- If no radioactive waste is generated in a year, a rating of 95% will be assigned.

Data collection: The Radiological Control Group collects this information and forwards it to EH&S Reporting.
Data evaluation: EH&S Reporting
Performance measure custodian: EH&S Reporting
Performance measurement validation: Relevant information is readily collectible.

Scoring: Based directly on ratio.

Performance Level (Ratio)	Adjectival Rating	% of Assigned Points†
0.80 to ≤ 0.90	Outstanding	90 to 100
0.70 to < 0.80	Excellent	80 to <90
0.60 to < 0.70	Good	70 to <80
0.50 to < 0.60	Marginal	60 to <70
0.40 to < 0.50	Unsatisfactory (Poor)	50 to <60
0.00 to < 0.40	Unsatisfactory (Failing)	0 to <50

† In each adjectival category, points are assigned by linear interpolation between the ranges listed.

5.4b Pounds of hazardous waste produced divided by pounds of hazardous waste which would have been produced without countermeasures. [4 points]

Introduction:

Goal: To reduce hazardous waste generation by a factor of 4 relative to the amount which would be produced without countermeasures.
Qualifiers: None
Data collection: Pounds of hazardous waste is determined by the Hazardous Waste Coordinator. Pounds of hazardous waste which would have been produced without countermeasures is determined jointly by the hazardous waste coordinator and the hazardous waste producer.
Data evaluation: EH&S Reporting
Performance measure custodian: EH&S Reporting
Performance measurement validation: The criteria used for determining pounds of hazardous waste which would have been produced without countermeasures are reviewed by EH&S Reporting to ensure validity.

Scoring: Based directly on ratio.

Performance Level (Ratio)	Adjectival Rating	% of Assigned Points†
0.4 to ≥ 0.25	Outstanding	90 to 100
0.5 to > 0.4	Excellent	80 to <90
0.6 to > 0.5	Good	70 to <80
0.7 to > 0.6	Marginal	60 to <70
0.8 to > 0.7	Unsatisfactory (Poor)	50 to <60
1.0 to > 0.8	Unsatisfactory (Failing)	0 to <50

† In each adjectival category, points are assigned by linear interpolation between the ranges listed.

5.5 Peer review of the Emergency Management Program in odd-numbered fiscal years, and of the Radiological Control Program in even-numbered fiscal years. [4 points]

Introduction:

Goal: Program (including planning and response services and facilities) is appropriate for a low-hazard, non-nuclear accelerator facility.

Qualifiers:

- Factors considered by Emergency Management Review Committee:
  - Gaps or redundancies relative to services available in surrounding communities
  - Appropriate balance between costs and potential benefits
  - Efficient use of resources applied
  - Related Appendix E requirements in effect on November 1, 1996, including those replaced by this performance measure, provided to Review Committee for their information and use
- Factors considered by Radiological Control Review Committee:
  - Management and control of exposures to workers and the public
  - Control of radiological damage to the environment
  - Achievement of exposures which are as low as reasonable, considering cost
  - Compliance with laws, regulations, and other Necessary Standards
  - Results of DOELAP review when conducted since the last Radiological Control Program review
  - Efficient use of resources applied
  - Related Appendix E requirements in effect on November 1, 1996, including those replaced by this performance measure, provided to Review Committee for their information and use

Data collection: The Emergency Management Manager and Radiological Control Manager, respectively, provide appropriate data to the Review Committee.

Data evaluation:

- Performed by the Review Committee
- Duration of review one to two days
- Emergency Management Review Committee:
  - Membership:
    - Emergency management professional from the surrounding community
    - Line manager from Thomas Jefferson National Accelerator Facility

- Line manager from an industrial organization in surrounding community
- Observer from DOE
- Members and chairperson selected by Emergency Management Manager, subject to DOE Site Office concurrence

• Radiological Control Review Committee:
- Membership:
  - Two radiological professionals from DOE laboratories
  - Line manager, active or recently retired, from an organization with substantial accelerator experience (excluding Jefferson Lab)
- Members selected by Radiological Control Manager, subject to DOE Site Office concurrence
- Professionals from DOE laboratories are expected to be familiar with applicable laws, regulations, and other Necessary Standards

• The Review Committee is asked to assign a percentage rating to the extent to which the goal, as qualified above, is achieved
• The Review Committee is asked to point out noteworthy strengths and also opportunities for improvement in effectiveness or efficiency

Performance measure custodian: EH&S Reporting
Performance measurement validation: The independence of the majority of the members assures the validity of the results.

Scoring: Based directly on percentage rating by Review Committee. The non-linear relationship to the percentage of assigned points reflects the subjectivity necessarily associated with a small review committee.

Performance Level (Score, %)	Adjectival Rating	% of Assigned Points†
80 to ≥ 100	Outstanding	90 to 100
70 to < 80	Excellent	80 to <90
60 to < 70	Good	70 to <80
50 to < 60	Marginal	60 to <70
40 to < 50	Unsatisfactory (Poor)	50 to <60
0 to < 40	Unsatisfactory (Failing)	0 to <50

† In each adjectival category, points are assigned by linear interpolation between the ranges listed.

5.6 Fraction of high-value facilities rated "Highly Protected Risk." [4 points]

Introduction:

Goal: All high-value facilities meet insurance carrier criteria for Highly Protected Risk designation.

Qualifiers:
• A facility is a separate building and its contents
• A facility is high-value if it has a maximum credible fire loss of $1 million or more
• A facility is high-value if it is mission essential

- A facility is mission essential if its maximum credible fire loss would result in more than a three month programmatic delay

Data collection: Facilities which are high-value are determined by the Plant Engineering Director, with DOE Site Office concurrence. Information required to classify the level of fire protection is collected by representatives from the technical services group of SURA's fire and property insurance carrier.

Data evaluation: Performed by representatives from the technical services group of SURA's fire and property insurance carrier

Performance measure custodian: EH&S Reporting

Performance measurement validation: Site Office concurrence ensures that the high-value facilities are correctly identified. The fact that the same insurance carrier classifies the fire protection risk and provides SURA's fire coverage assures accuracy in the classification.

Scoring: Based directly on fraction of high-value facilities meeting criteria.

Performance Level (Score)	Adjectival Rating	% of Assigned Points†
0.95 to 1.00	Outstanding	90 to 100
0.90 to < 0.95	Excellent	80 to <90
0.85 to < 0.90	Good	70 to <80
0.80 to < 0.85	Marginal	60 to <70
0.75 to < 0.80	Unsatisfactory (Poor)	50 to <60
0.00 to < 0.75	Unsatisfactory (Failing)	0 to <50

† In each adjectival category, points are assigned by linear interpolation between the ranges listed.

6. Quality of Business and Administrative Practices

6A. Overview

Objective: Maintaining effective and efficient business and administrative practices at Jefferson Lab.

Key Indicator (70 points)

6.0 Peer Review

General Charge to Peer Review Panel: With DOE concurrence, SURA will issue the charge to the Panel. Generally, the charge will be to assess the overall strengths and weaknesses of the Laboratory's business and administrative infrastructure, with a special focus each year on one of these Secondary Indicator Areas below. More detailed guidance will be developed based on special circumstances at the time of the review. To achieve this objective, review each major overhead/indirect cost area. Areas to be reviewed include:

- Self assessment
- Contractual requirements and performance standards
- Annual objectives
- Internal audits
- External reviews
- Benchmarking efforts

The Panel will have access to Secondary Indicators as input to its review.

Frequency and Duration: Annually, three days, with final report due 30 days from last day of review

Panel composition: A five to six member panel, selected by mutual agreement of SURA and DOE, and consisting of CAO equivalents from private industry, national laboratories and the scientific community (including one from the Jefferson Lab user community).

Secondary Indicators (30 points)

FACILITIES MANAGEMENT (6 points)

Objective: To manage non-capital and GPP construction projects to maximize the expenditure of funds on actual construction and complete these projects on time and within budget. Real properties usage is optimized. Facilities are adequately maintained and operated to minimize life cycle costs.

6.1 Percentage of overrun on all projects greater than $100K (contracted price). [1 point]

6.2 Variance of scheduled completion time for projects greater than $100K and of annual milestones of multi-year projects greater than $100K. [1 point]

6.3 Percentage of scheduled preventive maintenance tasks completed by their scheduled due dates. [2 points]

6.4 Average percentage of open corrective maintenance tasks (not including those designated Discretionary) that have been open for greater than 3 months. [2 points]

PROPERTY MANAGEMENT AND PROTECTION (6 points)

Objective: Establish, implement and maintain effective management practices for the control, utilization and disposal of personal property, promote cost economies and efficiencies that result in improved processes, customer satisfaction and the elimination of waste. Such practices cross programmatic lines and contribute to the mission accomplishment of DOE and/or the Laboratory. The Laboratory will, in addition, ensure effective protection of proprietary information, personnel, property and the general public in an effective, cost efficient, risk based and graded manner.

6.5 Percentage of value of property not located during the inventory cycle for each of the inventories conducted: capital equipment (biannual - odd fiscal years only), sensitive items (annual), and stores (annual). [5 points]

6.6 Stores Inventory metric[1]. [1 point]

FINANCIAL MANAGEMENT (6 points)

Objective: Assure effective planning, execution, and monitoring of budgets. Assure effective cash and debt management. Assure cost accounting system is in compliance with Cost Accounting Standards and that Disclosure Statement is current, complete, accurate, and reflective of the accounting system; assure financial practices are in conformance with the approved Disclosure Statement. Assure indirect cost activities are well managed. Assure SURA's internal audit control program maintains accuracy of the financial data, safeguards DOE assets, and prevents fraud, waste, and abuse.

6.7 Number of Cost Accounting Standards violations resulting from nonconformance with the approved Disclosure Statement, unless following DOE directives. [1 point]

6.8 Dollar percentage of invoices presented for payment deemed unallowable by the Contracting Officer as highlighted in the annual transaction testing audit and any IG audits that take place during the year. [1 point]

6.9 Percentage of vendor invoices paid with discounts lost. [1 point]

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[1] This metric will be defined and submitted by 3/31/2000 in conjunction with the DOE Site Office.

6.10 Percentage of annual actual cost variance from budget for each overhead pool. [1 point]

6.11 Number of occurrences that the monthly Cost Management Report (533M) had to be resubmitted to the DOE Contracting Officer to correct erroneous data reported by the Lab. [1 point]

6.12 Number of travel expense reports taken from a 10% random sample of Department audited expense reports that contained an error exceeding $100 that was not detected at the time the expense report was originally audited by Business Services. [1 point]

PROCUREMENT (6 points)

Objective: Assure procurement functions are carried out so as to be cost effective, meet contractual requirements, satisfy customers' needs, and meet socioeconomic goals.

6.13 Average procurement cycle time to award a small purchase order above the micro-purchase threshold (all actions >$2,500 <$100,000). [3 points]

6.14 Percent of total available purchasing dollars awarded to: small business concerns; small women-owned business concerns; and small disadvantaged business concerns. [3 points]

HUMAN RESOURCES AND SERVICES (6 points)

Objective: Attract and retain a diverse workforce capable of successfully executing Jefferson Lab's mission. Provide a workplace environment conducive to employee well-being and growth. Maintain innovative compensation practices aligned with the market place to attract and retain a diverse, well-trained workforce. Maintain innovative and cost-effective health care programs aligned with the commercial market place for similarly situated workforce programs.

6.15a Percent of action oriented diversity commitments, as established in the Affirmative Action Plan (AAP) completed during the fiscal year. [1 point]

6.15b Representation of protected classes (PC) within each EEO-1 category at the end of the fiscal year compared to the beginning of the fiscal year (adjusted for voluntary separations). [1 point]

6.16 Sustainable EEOC charges. [1 point]

6.17 Achieve compensation positions aligned with market practices to reflect the Lab's mid-market compensation philosophy. [1.5 points]

6.18 Percent of three-year rolling average of annual increases in premium cost relative to market. [1.5 points]

6B. Performance Evaluation Plan

6.0 Peer Review [70 Points]

Introduction:
The "Key Indicator" for this performance objective will be based on a "peer review" of the Laboratory's administrative system. Associated with the peer review are a set of secondary indicators (performance measures 6.1 - 6.18 listed below) that will be used to monitor the Laboratory's administrative performance in a more detailed way and to extend the validity of the peer review.

Scoring: The Peer Review Panel will assign an adjectival rating to the performance of the laboratory in producing quality business and administrative practices, and an associated percentage of the Key Indicator points within the ranges associated with that rating, according to the following Table:

Adjectival Rating	% of Assigned Points
Outstanding	90 to 100
Excellent	80 to < 90
Good	70 to < 80
Marginal	60 to < 70
Unsatisfactory (Poor)	50 to < 60
Unsatisfactory (Failing)	0 to < 50

FACILITIES MANAGEMENT (6 points)

6.1 Percentage of overrun on all projects greater than $100K (contracted price) [1 point]

Introduction:
Maintain level of construction control to limit change orders and cost overruns to only those which bring added value to the project or are appropriate to produce the desired end product. Performance level will be calculated from the initial bid (contracted) amounts compared to the final contract amounts considering all applicable funding increases for all appropriate contracts closed out during the rating period. Increases considered not applicable are those whose root cause is:

- Post-design programmatic change by user (physical or schedule)
- New technology deemed a value-added inclusion (post-award)
- Value engineering proposals accepted (both additive and deductive)

Value determined will be expressed as a percent overrun.

Performance Level = [(Applicable Final Contract Cost/Initial Contract Amount) - 1] * 100

Scoring:

Performance Level	Adjectival Rating	% of Maximum Assigned Points
≤ 8%	Outstanding	100
> 8% to ≤ 12%	Excellent	85
> 12% to ≤ 18%	Good	75
> 18% to ≤ 25%	Marginal	60
> 25% to ≤ 35%	Unsatisfactory (Poor)	50
> 35%	Unsatisfactory (Failing)	0

6.2 Variance of scheduled completion time for projects greater than $100K and of annual milestones of multi-year projects greater than $100K. [1 point]

Introduction:
Calculation of performance toward this goal will be made by comparing the actual number of days to completion of an identified project (or to a designated milestone) to the number specified contractually. This will be expressed as a coefficient of actual divided by contracted. Additional time attributed to the following categories will not be included for the purpose of this metric:

- Acts of God (as contractually accepted)
- Labor disputes/strikes
- Documented material unavailability (contractually accepted)
- User desired post-award change orders for which additional time is appropriate

Scoring: For purposes of this report, "completion" shall be when the project is physically complete; turned over to user or beneficial occupancy taken.

Performance Level	Adjectival Rating	% of Maximum Assigned Points
≤ 1.10	Outstanding	100
> 1.10 to ≤ 1.25	Excellent	85
> 1.25 to ≤ 1.30	Good	75
> 1.30 to ≤ 1.40	Marginal	60
> 1.40 to ≤ 1.50	Unsatisfactory (Poor)	50
> 1.50	Unsatisfactory (Failing)	0

6.3 Percentage of scheduled preventive maintenance tasks completed by their scheduled due dates. [2 points]

Scoring:

$$\text{Performance Level} = \frac{\text{PMs completed as scheduled}}{\text{PMs scheduled}}$$

where PM is defined to be Total Preventive Maintenance actions scheduled per unit time. Activities considered for FY2000 will include mechanical equipment, electrical distribution system, and fire detection/suppression system (water based) subcontracted maintenance. Tasks

that are prohibited by operations and so documented will be rescheduled. The new completion date will be used for performance level calculation.

Performance Level	Adjectival Rating	% of Maximum Assigned Points
≥ 94%	Outstanding	100
≥ 90% to < 94%	Excellent	90
≥ 84% to < 90%	Good	75
≥ 79% to < 84%	Marginal	60
≥ 75% to < 79%	Unsatisfactory (Poor)	50
< 75%	Unsatisfactory (Failing)	0

6.4 Average percentage of open corrective maintenance tasks (not including those designated Discretionary) that have been open for greater than 3 months. [2 points]

Scoring: Identified maintenance needs will be categorized as follows:

- Corrective Maintenance (CM) - Critical tasks which could lead to greater problems or costs within a 3-6 month period if corrective maintenance is not accomplished in a timely manner.
- Discretionary Corrective Maintenance (DCM) - Identified problems that should be accomplished for system integrity, but do not fit the criticality for CM designation.

The performance level will be compiled on a quarterly basis from input provided by the maintenance subcontractors as addressed in Indicator 6.3. Only data relative to CM tasks will be used in the calculations, and the ratio will be obtained by:

$$\text{Performance Level} = \frac{\text{CMs open} > 3 \text{ months}}{\text{CMs open}}$$

The comments of Indicator 6.3 relative to operations interference apply.

Performance Level	Adjectival Rating	% of Maximum Assigned Points
≤ 10%	Outstanding	100
> 10% to ≤ 18%	Excellent	85
> 18% to ≤ 28%	Good	75
> 28% to ≤ 35%	Marginal	60
> 35% to ≤ 40%	Unsatisfactory (Poor)	50
> 40%	Unsatisfactory (Failing)	0

PROPERTY MANAGEMENT AND PROTECTION (6 points)

6.5 Percentage of value of property not located during the inventory cycle for each of the inventories conducted: capital equipment (biannual - odd fiscal years only), sensitive items (annual), and stores (annual). [5 points]

Scoring:

Performance Level = **[**(Value of property not located during each of the inventories / Corresponding value of property for each class inventoried) * 100**]**

Submeasure	Frequency	Odd Years	Even Years
6.5a Capital Equipment	biannual	2 points	0 pts. (not conducted)
6.5b Sensitive	annual	2 points	4 points
6.5c Precious Metals	annual	1 point	1 point

Performance Level	Adjectival Rating	% of Maximum Assigned Points
< 1%	Outstanding	100
≥ 1% to < 1.5%	Excellent	85
≥ 1.5% to < 2%	Good	70
≥ 2.0% to < 3%	Marginal	55
≥ 3.0% to < 4.0%	Unsatisfactory (Poor)	40
≥ 4.0%	Unsatisfactory (Failing)	0

6.6 Stores Inventory turnover rate. [1 point]

This metric is being developed in order to accurately measure performance related to transition of the stockroom from the construction phase to the steady state phase of the Lab. Final metric to be submitted by 3/31/2000.

FINANCIAL MANAGEMENT (6 points)

6.7 Number of Cost Accounting Standards violations resulting from nonconformance with the approved Disclosure Statement, unless following DOE directives. [1 point]

Scoring:

Performance Level	Adjectival Rating	% of Maximum Assigned Points
no violations	Outstanding	100
one violation	Excellent	85
two violations	Good	70
three violations	Marginal	55
four violations	Unsatisfactory (Poor)	40
five violations	Unsatisfactory (Failing)	0

6.8 Dollar percentage of invoices presented for payment deemed unallowable by the Contracting Officer as highlighted in the annual transaction testing audit and any IG audits that take place during the year. [1 point]

Scoring:

Performance Level	Adjectival Rating	% of Maximum Assigned Points
0% to 1%	Outstanding	100
< 1% to 2%	Excellent	85
< 2% to 3%	Good	70
< 3% to 4%	Marginal	55
< 4% to 5%	Unsatisfactory (Poor)	40
< 5%	Unsatisfactory (Failing)	0

6.9 Percentage of vendor invoices paid with discounts lost. [1 point]

Scoring: The measure of percentage of invoices available for discount and not successfully taken as a percentage of invoices processed with discounts plus invoices with discounts lost are:

Performance Level	Adjectival Rating	% of Maximum Assigned Points
0% to 1%	Outstanding	100
< 1% to 2%	Excellent	85
< 2% to 3%	Good	70
< 3% to 4%	Marginal	55
< 4% to 5%	Unsatisfactory (Poor)	40
< 5%	Unsatisfactory (Failing)	0

6.10 Percentage of annual actual cost variance from budget for each overhead pool. [1 point]

Scoring:

Performance Level	Adjectival Rating	% of Maximum Assigned Points
0% to 3.0% variance	Outstanding	100
3.1% to 6.0% variance	Excellent	85
6.1% to 9.0% variance	Good	70
9.1% to 12.0% variance	Marginal	55
12.1% to 15.0% variance	Unsatisfactory (Poor)	40
> 15% variance	Unsatisfactory (Failing)	0

6.11 Number of occurrences that the monthly Cost Management Report (533M) had to be resubmitted to the DOE Contracting Officer to correct erroneous data reported by the Lab. [1 point]

Scoring:

Performance Level	Adjectival Rating	% of Maximum Assigned Points
0 occurrences	Outstanding	100
1 occurrence	Excellent	85
2-3 occurrences	Good	70
4-5 occurrences	Marginal	55
6-7 occurrences	Unsatisfactory (Poor)	40
≥ 8 occurrences	Unsatisfactory (Failing)	0

6.12 Number of travel expense reports taken from a 10% random sample of Department audited expense reports that contained an error exceeding $100 that was not detected at the time the expense report was originally audited by Business Services. [1 point]

Scoring:

Performance Level	Adjectival Rating	% of Maximum Assigned Points
0% -2.0%	Outstanding	100
2.1% - 5.0%	Excellent	85
5.1% - 10%	Good	70
10.1% - 15%	Marginal	55
15.1% - 20%	Unsatisfactory (Poor)	40
> 20%	Unsatisfactory (Failing)	0

PROCUREMENT (6 points)

6.13 Average procurement cycle time to award a small purchase order above the micro-purchase threshold (all actions >$2,500 <$100,000). [3 points]

Introduction:
Procurement cycle time is based on the date the purchase requisition is received in Procurement until the action is awarded, but does not include the time required to establish new vendors or time required by Jefferson Lab requisitioners to correct deficient requisition documentation.

Scoring:

Performance Level	Adjectival Rating	% of Maximum Assigned Points
Less than 14 Calendar Days	Outstanding	100
≥ 14 to < 21 Calendar Days	Excellent	85
≥ 21 to < 35 Calendar Days	Good	70
≥ 35 to < 42 Calendar Days	Marginal	55
≥ 42 to < 49 Calendar Days	Unsatisfactory (Poor)	40
≥ 49 Calendar Days	Unsatisfactory (Failing)	0

6.14 Percent of total available purchasing dollars awarded to: small business concerns; small women-owned business concerns; and small disadvantaged business concerns. [3 points]

Introduction:

- Total estimated dollar value of all planned subcontracting (to Large and Small Business concerns): $12,200,000.
- "Total Available Purchasing Dollars" excludes: (i) awards to Government sources (including awards on GSA price schedules to large business firms); (ii) awards to nonprofit institutions (including but not limited to universities and national labs); (iii) awards to foreign sources; and (iv) micropurchases (awards ≤ $2,500).
- Awards to women-owned business concerns, and small disadvantaged business concerns will be counted for every Submeasure that is applicable.

FY99 Peak Performance Goals (PPG):
- Submeasure 6.14a: Award 45% of total available purchasing dollars (est. $5,490,000) to small business concerns (1 point)
- Submeasure 6.14b: Award 6% of available purchasing dollars (est. $732,000) to women owned business concerns (1 point)
- Submeasure 6.14c: Award 6% of available purchasing dollars (est. $732,000) to small disadvantaged business concerns (1 point)

Scoring: In each submeasure, scoring relative to peak performance goals will be:

Performance Level	Adjectival Rating	% of Maximum Assigned Points
100%	Outstanding	100
90% to < 100%	Excellent	85
70% to < 90%	Good	70
60% to < 70%	Marginal	55
50% to < 60%	Unsatisfactory (Poor)	40
< 50%	Unsatisfactory (Failing)	0

HUMAN RESOURCES AND SERVICES (6 points)

6.15a. Percent of action oriented diversity commitments, as established in the Affirmative Action Plan (AAP), Section VII-C, completed during the fiscal year. [1 point]

Scoring: AAP Assessment Factor = $\frac{\text{\# of action oriented diversity commitments}}{\text{Total \# of action oriented diversity commitments}}$

Performance Levels	Adjectival Rating	% of Maximum Assigned Points
Achieve ≥ 90% of diversity commitments	Outstanding	100
Achieve 80% to < 90% of diversity commitments	Excellent	85
Achieve 70% to < 80% of diversity commitments	Good	70
Achieve 55% to < 70% of diversity commitments	Marginal	55
Achieve less 55% of diversity commitments	Unsatisfactory	40

6.15b. Representation of protected classes (PC) within each EEO-1 category at the end of the fiscal year compared to the beginning of the fiscal year (adjusted for voluntary separations). [1 point]

Scoring: PC Assessment Factor = $\frac{\text{\% of PC to total workforce at the end of FY99 within each EEO-1 category}}{\text{\% of PC to total workforce at the beginning of FY99 within each EEO-1 category}}$

where:

Total Workforce = Total number of regular and term employees (excludes casuals, temps, and students)

EEO-1 Category = Occupational job categories as defined by EEOC (N=10)

Protected Classes (PC) = Women and minorities as defined by EEOC (N = 20): 2PC * 10 EEO-1 categories

Note: EEO-1 categories where Utilization percentages meet or exceed Availability percentages are determined to be fully in compliance with this metric.

Performance Levels	Adjectival Rating	% of Maximum Assigned Points
Maintain beginning PC factor in 100% of protected classes	Outstanding	100
Maintain 85% to < 100% of protected classes	Excellent	85
Maintain 70% to < 85% of protected classes	Good	70
Maintain 50% to < 70% of protected classes	Marginal	55
< 50% of protected classes	Unsatisfactory	40

6.16 Sustainable EEOC charges. [1 point]

Scoring:

Performance Level	Adjectival Rating	% of Maximum Assigned Points
0 charges	Outstanding	100
1 charge	Good	80
> 1 charge	Unsatisfactory	0

6.17 Achieve compensation positions aligned with market practices to reflect the Lab's mid-market compensation philosophy. [1.5 points]

Scoring: Compensation Factor = $\frac{\sum \text{(weighted average salary within each classification)}}{\sum \text{(weighted salary range midpoint* within each classification)}}$

*Assumes salary range midpoints reflect mid-market position

Performance Level	Adjectival Rating	% of Maximum Assigned Points
Average salaries within ±3.0% of market average	Outstanding	100
Average salaries within ±3.1% to ±5.0% of market average	Excellent	80
Average salaries within ±5.1% to ±7.0% of market average	Good	70
Average salaries within ±7.1% to ±10.0% of market average	Marginal	60
Average salaries greater than ±10.0% of market average	Unsatisfactory	50

6.18 Percent of three-year rolling average of annual increases in premium cost relative to market. [1.5 points]

Performance Level	Adjectival Rating	% of Maximum Assigned Points
5% or more below market data	Outstanding	100
Up to 4.9% below market or no more than 2.0% above market	Excellent	80
2.1% to 5.0% above market	Good	70
5.1% to 8.0% above market	Marginal	60
8.1% to 12.0% above market	Unsatisfactory (Poor)	50
12.1% or more above market	Unsatisfactory (Failing	0

7.0 Responsible Institutional Management

7A. Overview

Objective: To manage and operate Jefferson Lab in accordance with generally accepted quality management principles so as to achieve its mission goals in a cost effective manner while satisfying its customers, and providing a culture which builds trust and facilitates continuous improvement in all areas of the institution.

Key Indicator (100 points)

7.0 Peer Review

General Charge to Peer Review Panel: With DOE concurrence, SURA will issue the charge to the Panel. Generally, the charge will be to assess overall institutional management of Jefferson Lab with emphasis on the three criteria of strategic planning, managerial effectiveness, and organizational culture. More detailed guidance will be developed based on special circumstances at the time of the review. All other metrics provided for in this Appendix are made available to this committee as well as the results of external and internal reviews during the performance period.

Frequency and Duration: Two days every 2 years, divided between presentations, site tours/inspections, and report drafting. The final report is due 30 days from conclusion of review.

Panel composition: A panel selected by mutual agreement of SURA and DOE, and consisting of:

- 1 DOE Lab Director
- 1 CAO
- 1 Industrial Chief Scientist
- 1 University Provost or President with Scientific/Engineering Credentials
- 1 International Lab Director
- Chairs of the Outstanding Science and Technology Peer Review and of the Quality of Business and Administrative Practices Peer Review.

Prior to the selection of the panel members, the composition of the panel may be adjusted, by mutual agreement of SURA and DOE, to match the programs and activities of the Laboratory and the special circumstances to be addressed by the review.

Note: This review was held in FY96 and again in FY98. The same score achieved in FY96 was carried forward to FY97 and included in the FY97 performance evaluation calculation. The same score achieved in FY98 was carried forward to FY99 and included in the FY99 performance evaluation calculation. The score received in the upcoming FY2000 review will be carried forward and included in the FY2001 performance evaluation calculation.

7B. Performance Evaluation Plan

Peer Review Criteria:

Strategic Planning: (40%)

- Responsiveness to national scientific and technical priorities, to the DOE Strategic Plan and other DOE guidance, and to user community requirements in the development of the Jefferson Lab scientific program. Also includes "institutional citizenship" within the DOE lab system and with respect to the state and local communities.
- Identification and cultivation of core competencies that eliminate unnecessary duplication and overlap in advancing the national/international knowledge and resource base.
- Leadership on national/international scale in mission related competencies.

Managerial Effectiveness: (40%)

- Cost effective use of available resources to optimize benefits for the nation's scientific agenda.
- Consistently meets or exceeds established commitments
- Responsible programmatic, EH&S and administrative balance
- Cost reductions through process improvement and reengineering

Organizational Culture (20%)

- Advocacy of quality principles to enhance staff performance
- Open, accurate, timely internal and external communications, including communications with the state and local communities
- Promotes diversity
- Sustained high morale and productivity